



Summary of Policy and Regulatory updates for KIP preparation



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Introduction

The 1987 Montreal Protocol, which was created to protect the diminishing ozone layer, led to a large increase in the use of Hydrofluorocarbons (HFCs). Back then HFCs were thought to be acceptable substitutes for ozone layer-depleting chlorofluorocarbons (CFCs), not having considered, HFCs being among the most potent greenhouse gases. Contributing to more global warming than carbon dioxide over the short term, HFCs are commonly used in refrigeration, air conditioning, building insulation, and aerosols. In 2016, the international community adopted the Kigali Amendment to the 1987 Montreal Protocol, to phase out the use of Hydrofluorocarbons (HFCs). Committing the countries to cut the production and consumption of HFCs by more than 80 percent over the next 30 years and avoiding up to 0.5° Celsius warming by the end of the century.

Key features of the Kigali Amendment:

- The HFC phase-down involves a three-step approach, taking into account different situations for various groups of countries (see phase-down schedule table below).

Kigali Amendment: Phase-down schedule for HFCs in Article 5 and non-Article 5 parties

Baseline and phase-down as CO ₂ e	A5 parties (developing countries) – Group 1	A5 parties (developing countries) – Group 2	Non-A5 parties (developed countries)
Baseline formula	Average HFC consumption for 2020-2022 + 65% of HCFC baseline	Average HFC consumption for 2024-2026 + 65% of HCFC baseline	Average HFC consumption for 2011-2013 + 15% of HCFC baseline*
Freeze	2024	2028	–
1st step	2029 – 10%	2032 – 10%	2019 – 10%
2nd step	2035 – 30%	2037 – 20%	2024 – 40%
3rd step	2040 – 50%	2042 – 30%	2029 – 70%
4th step	–	–	2034 – 80%
Plateau	2045 – 80%	2047 – 85%	2036 – 85%

Notes:

* For Belarus, Russian Federation, Kazakhstan, Tajikistan, Uzbekistan, 25% HCFC component of baseline and different initial two steps (1) 5% reduction in 2020 and (2) 35% reduction in 2025

1. Group 1: Article 5 parties not part of Group 2

2. Group 2: Countries with High Ambient Temperatures (HAT): Bahrain, India, the Islamic Republic of Iran, Iraq, Kuwait, Oman, Pakistan, Qatar, Saudi Arabia and the United Arab Emirates

3. Technology review in 2022 and every five years

4. Technology review four to five years before 2028 to consider the compliance deferral of two years from the freeze of 2028 of Article 5 Group 2 to address growth in relevant sectors above certain threshold.

- Requirement to destroy HFC-23, from 1 January 2020, produced during the manufacture of HCFCs or HFCs to the extent practicable using technology approved by the Parties in the same twelve-month period.
- Licensing for the import and export of new, used, recycled and reclaimed HFCs.
- GWPs (100 year) have been listed for CFCs, HCFCs and HFCs.
- HFOs and HCFOs are not included in the Kigali Amendment.

With the Multilateral Fund further supporting the countries to meet their compliance obligations through the Kigali Implementation Plan (KIP). Mutual communication and cooperation shows the need for sharing and exchanging the experience throughout the project preparation phase and data collection activities. UNIDO's Montreal Protocol Unit (MPU) as the implementing agency focusing on the Kigali Amendment provisions and phase-down targets, Executive Committee relevant decisions, analysis of the legislative and regulatory framework, prepared this summary based on the UNIDO experience in the KIP development to assist National Ozone Units (NOUs) and local experts in the preparation of Kigali Implementation Plans (KIPs).

Upon finalization of KIPs Preparation Guidelines by the Executive Committee of the Multilateral Fund, this summary will be re-issued to reflect additional details and to be in line with the forthcoming guidelines.

A list of HFCs and HFO blends used in refrigerants that are subject to the F-Gas Regulation including their compositions, GWPs, and main applications referred in **Annex I** to this guideline as an excel attachment.

A prioritization matrix for KIP preparation is recommended in **Annex II** to this report as an excel attachment.

1. Key updates

Table 1. Summary of ExCom recommendations related to KIP preparation

Area	General recommendations for KIP activities
Standards.	<ul style="list-style-type: none"> - Parties are expected to work towards ensuring global industry standards enable the safe introduction of low-GWP alternatives to HFCs. - Awareness and outreach programmes to promote the introduction of MEPS and labelling systems. - IS component should include mandatory certification of technicians by recognized bodies.
Energy Efficiency (EE).	<ul style="list-style-type: none"> - Parties are expected to agree a way forward to maximize energy efficiency in the transition out of HFCs. - The energy-efficiency projects/KIP investment components should be closely linked to the HFC phase-down, in line with decision XXVIII/2, and included activities that are included in the document UNEP/OzL.Pro/ExCom/91/63, namely: <ol style="list-style-type: none"> a) manufacturing activities; b) assembly and installation activities of large commercial and industrial refrigeration, air-conditioning and heat-pump equipment; c) servicing activities; d) technical assistance for small and medium enterprises (SMEs) in manufacturing e) einstallation f) pilot projects designed for and targeted towards end users, relating primarily to energy-efficient small-capacity refrigeration, air-conditioning, and heat-pump (RACHP) equipment using alternative low-GWP technologies to address challenges related to market acceptance. - EE-related activities should be in coordination with relevant energy efficiency authorities and the national standards bodies. - IS component should include energy efficiency (EE) labelling, MEPS, and benchmarking. - Introduction of energy-efficient RACHP equipment operating with low- or zero-GWP refrigerants.
Institutional Strengthening (IS)	<p>Activities are in line with the checklists and facilitate:</p> <ul style="list-style-type: none"> - Ratification/Implementation of the Kigali Amendment - HFC equipment might be exported to developing countries as long as there is a market - HFC equipment has a long lifetime and new imports increase dependency on HFCs for servicing - Establishment of recycling, reclamation, and cost-effective destruction; - The potential linkages between related MEAs, as well as with HPMP projects is essential in order to avoid any duplication of efforts; - Digitalization of data collection and processing (strengthening of information exchange and monitoring) - Cross-sectoral: GESEP, circularity, financial and economic instruments, eco-labelling, Sustainable Public Procurement, digitalization of public services¹
Capacity building	<p>Component should include:</p> <ul style="list-style-type: none"> - Approximation of EU standards relevant to the country's obligations or on a voluntary basis to support business access to EU markets. - Workshops curriculum for technicians, architects and investors based on the EU standards and regulations.

¹ The European Commission manages an IT system that allows companies to register, apply and be granted HFC quotas. It includes the functionality to transfer quotas and authorisations/delegations (for pre-charged equipment). The European Commission also manage IT systems that grant ODS quota licences and ODS lab use authorisations directly to companies. The European Environment Agency (EEA) manages an IT system that companies use to report on F-gas activities e.g. quantity produced, imported, and exported. The European Commission then provides this information to the UN on behalf of all Member States (previously including the UK) for Montreal Protocol purposes. The EEA also manages an IT system that companies are obliged to use to report on ODS activities e.g. quantity produced, imported, and exported, as well as that used for feedstock or destroyed. The European Commission then provides this information to the UN on behalf of all Member States for Montreal Protocol purposes. The specific systems are: • HFC Registry – registration and quota allocation • HFC Reporting • ODS Licensing System • ODS Laboratory and Analytical Registry • ODS Reporting System

	<ul style="list-style-type: none"> - Workshops curriculum for enforcement and customs officers based on understanding of key smuggling methods² - Outreach, information, and awareness campaign (consumers, installers, end-users, equipment owners, investors, building planners). - Attention the building sector (passive cooling, insulation, shading, and reduced need for heating/cooling). - Promotion and introduction of innovative technologies (integrated heating/cooling/hot water, heat pumps replacing water boilers, not-in-kind, free cooling etc.).
Integrated approach between HCFC and HFC phase-out	<ul style="list-style-type: none"> - Identify of opportunities for an integrated HCFC phase-out and HFC phase-down, and identify sectors where this would not be possible so that activities could be implemented, whether in parallel or sequentially to HCFC phase-out. - Determine the approach, and specific measures and activities, to control an increase in HFC consumption, including that resulting from the implementation of the HPMP. - An integrated approach in the refrigeration servicing sector could bring several benefits to Article 5 countries and the Fund institutions (bilateral and implementing agencies, Secretariat, Executive Committee). - The phase-out of HFCs in the domestic and commercial stand-alone manufacturing sector could be implemented in the short term, as there are available alternative technologies (this would be in parallel to HCFC activities as there is no consumption of HCFC in the sector). - Total phase-out of HCFC-22 and R-410A (or other high-GWP refrigerants) in the residential and commercial AC sector needs to be explored on a case-by-case basis. - Addressing HFCs in the PU foam sector as soon as possible could help the sustainability of the HCFC phase-out in some countries. - HFC phase-down in other sectors seems unlikely to be integrated with HCFC phase-out but could be reassessed as more information become available.

Table 2. Checklist of Relevant ExCom Decisions

Decision	Comment
UNEP/OzL.Pro/ExCom/91/63	Preliminary criteria for pilot IS projects.
Decision 89/6 -Energy efficiency –(1).	Operationalizing paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5 of the Parties (decision 84/88). Pilot projects designed for and targeted towards end users, relating primarily to energy-efficient small-capacity refrigeration, air-conditioning and heat-pump (RACHP) equipment using alternative low-GWP technologies to address challenges related to market acceptance.
Decision 89/6 -Energy efficiency –(3).	Operationalizing paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5 of the Parties (decision 84/88). To provide the following funding, when needed, for the activities identified in subparagraph (b) above, on the understanding that Article 5 countries would have flexibility in using the additional funding to address specific needs that might arise during project implementation relating to introduction of alternatives to HCFCs with low- or zero-GWP refrigerants and for maintaining energy efficiency in the refrigeration servicing sector: less than 120 mt – 100K, 120-160 – 120K
Decision 89/6 -Energy efficiency –(4)	Operationalizing paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5 of the Parties (decision 84/88). To request bilateral and implementing

² **Smuggling methods examples.**

False Labelling: ODS and F-gases are smuggled in cylinders or packaging labelled as legal products. As licensing systems came into force and all ODS were flagged by customs, smugglers switched to concealing CFCs in cylinders labelled as HFC134a, a non ozone-depleting alternative. In some instances, this contraband was actually sold as HFCs due to the higher market prices compared with CFCs. Recently illicit shipments of HCFCs have been falsely labelled as HFCs.

Mis-declaration: ODS are disguised by putting the names of other similar, legal chemicals on shipping documents and invoices. This method is often combined with “double-layering”; filling a shipping container with cylinders of illegal ODS except for a layer of the legitimate chemical stated on the Bill of Lading next to the container door. cursory inspection will fail to uncover the ODS at the back of the container.

Fake recycled material: Trade in recycled ODS is less regulated than for virgin CFCs. Smugglers claim the material is recycled on shipping documents and permits, when in fact it is virgin chemicals. The suppliers may even deliberately add a small amount of contaminant to the virgin chemical to make it appear the material has been used, should it be tested. It is likely that smugglers will attempt to import back market HCFCs using this ruse again.

Concealment: ODS are simply hidden in ships, cars, or trucks and moved across border. This method usually involves small quantities, but is lucrative and the overall volume can be significant.

Transshipment fraud: Consignments of ODS ostensibly destined for legitimate end markets are diverted onto black markets. This type of fraud often involves complex shipping routes, passing through transit ports and free-trade zones where customs procedures may be more relaxed.

	<p>agencies, when submitting an HPMP tranche request, to include in the tranche implementation plan, the specific actions, performance indicators and funding associated with the activities referred to in sub-paragraph (b) above; a progress report on implementation of those activities under the previous funding tranche; and a revised Agreement between the Government of the Article 5 country concerned and the Executive Committee.</p>
Decision 89/7 – (1).	<p>Key aspects related to HFC-23 by-product control technologies (decision 83/67(d)). When approving projects to control HFC-23 by-product emissions from production lines that would continue to produce the relevant Annex C, Group I or Annex F substance after the completion of the project, to invite the relevant Article 5 country to consider requesting additional funding for independent verification of the HFC-23 by-product generated, destroyed, sold, stored and emitted, under the subsequent stage of its HCFC phase-out management plan, until approval of its Kigali HFC implementation plan, at which time verification would continue under that plan.</p>
Decision 89/7 – (2).	<p>Key aspects related to HFC-23 by-product control technologies (decision 83/67(d)). When approving projects to control HFC-23 by-product emissions from production lines that would continue to produce the relevant Annex C, Group I or Annex F substance after the completion of the project, to invite the relevant Article 5 country to consider requesting additional funding for independent verification of the HFC-23 by-product generated, destroyed, sold, stored and emitted, under the subsequent stage of its HCFC phase-out management plan, until approval of its Kigali HFC implementation plan, at which time verification would continue under that plan.</p>
ExCom Decision 89/5.	<p>Based on the basis of the working text in the ExCom 91 report – Annexes XXXII and.</p> <p>Potential strategies, policy measures and commitments, as well as projects and activities that could be integrated within stage I of HFC phase-down plans for Article 5 countries to ensure limits on growth and sustainable reductions in HFC consumption (decision 88/75)</p>
Decision XXXIV/4: Illegal import of certain refrigeration, air-conditioning and heat pump products and equipment	<p>To invite parties that have restricted the manufacture and/or import of certain refrigeration, air-conditioning and heat pump products and equipment containing or relying on controlled substances, including with respect to energy efficiency, and that do not want to receive such products and equipment from other parties against payment or free of charge, to submit to the Secretariat by 1 May 2023 the information listed below:</p> <p>The types of products and equipment concerned, including their codes in the Harmonized Commodity Description and Coding System, where applicable;</p> <p>The specific domestic restrictions on the controlled substances (i.e., maximum global warming potential of HFCs permitted to be used) for each category of product and equipment;</p> <p>The minimum energy efficiency performance standard permitted under domestic legislation for each category of product and equipment;</p> <p>Any attempted illegal imports of such restricted products and equipment to their countries;</p>
Background papers of 91stExCom	<ul style="list-style-type: none"> -91L1 DRAFT REPORT -CRP5_Disposal -CRP6_EE-pilot-projects -CRP7_IS -CRP8_KIP-Niger

2. Legislation & standards related to the ODS and HFC management

The EU already has one of the most comprehensive and protective regulatory frameworks for chemicals, supported by the most advanced knowledge base globally. Multilateral Environment Agreements (MEAs) and EU regulation related to chemicals management, among other, help to:

- identify the chemicals streams (list and classes), keep them registered and evaluated
- introduce the selective admission onto the market
- control of quality, packaging and labelling of chemicals
- control the suppliers
- ensure safe use (safety rules and certification of technicians)
- monitor the negative impact (evaluation of pollution of environment, statistics of poisoning)
- to facilitate the development of BEPs and BATs and approximation of them to the national needs
- to introduce and maintain the compensation of damages

Table 3. Checklist of the EU legislation relevant for member states, candidate countries, parties of other agreements with EU ³

International legislation/regulation	Relevant context	Status of implementation in a country (examples of national documents)	Upcoming
<p>Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer (ODS)</p>	<p>Regulation (EC) No 1005/2009: The principal Regulation to reduce ozone-depleting substances (ODS) and protect the ozone layer. Implements our international obligations under the Montreal Protocol. Introduces obligations, restrictions, quota and licensing for ODS. Stipulates norms for: reduction, import, export, use, reclamation and processing of ODS and relevant reporting; application of equipment containing or relying on ODSs, including:</p> <ul style="list-style-type: none"> -adoption of national legislation and designation of competent authority/ies -establishment of a ban on the production of controlled substances, except for specific uses (Article 4) -establishment of a ban on the placing on the market and use of controlled substances and for reclaimed HCFCs which might be used as refrigerants, according to the obligations of Georgia taken under the Montreal Protocol (Articles 5 and 11). Georgia will freeze the consumption of HCFCs at baseline level by 2013, decrease the consumption by 10 % in 2015, by 35 % in 2020, 		

³ Subject to a voluntary application for other countries in a format of application of Best Available Practice



	<p>by 67,5 % in 2025 and phase out by 2030 (except 2,5 % for servicing use up to 2040)</p> <p>-definition of the conditions for the production, placing on the market and use of controlled substances for exempted uses as feedstock, process agents, for essential laboratory and analytical uses, critical uses of halons (Chapter III). The use of Methyl Bromide will be only allowed for critical uses and Quarantine and Pre-shipment applications in Georgia</p> <p>-establishment of a licensing system for the import and export of controlled substances for exempted uses (Chapter IV) and reporting obligations for undertakings (Article 27)</p> <p>-establishment of obligations to recover, recycle, reclaim and destruct used controlled substances (Article 22)</p> <p>-establishment of procedures for monitoring and inspecting leakages of controlled substances (Article 23)</p>		
Commission Regulation (EU) No 291/2011	Covers essential ODS uses for laboratories.		
Commission Regulation (EU) No 537/2011	Mechanism for the allocation of quantities of ODS controlled substances allowed for laboratory and analytical uses.		
Commission Regulation (EC) No 1497/2007	F-gas leakage checking requirements for fire protection systems.		
Commission Regulation (EC) No 1516/2007	F-gas leakage checking requirements for refrigeration, air conditioning and heat pumps.		
Commission Regulation (EC) No 304/2008	F-gas certification for fire protection. Relates to personnel qualification standard and mutual recognition of qualifications.		
Commission Regulation (EC) No 306/2008	F-gas certification for solvents. Relates to personnel qualification standard and mutual recognition of qualifications.		
Commission Regulation (EC) No 307/2008	F-gas certification for mobile air conditioning (i.e. vehicles). Relates to personnel qualification standard and mutual recognition.		
Commission Implementing Regulation (EU) No 1191/2014	F-gases reporting format. Sets out the format for businesses to report on F-Gas production and use as required by Regulation 517/2014.		
Commission Implementing Regulation (EU) 2017/1375	Amends/updates the reporting requirements of Regulation 1191/2014.		
Commission Implementing Regulation (EU) 2018/1992	Amends/updates the reporting requirements of Regulation 1191/2014.		
Regulation (EU) 2019/522	Amends/updates the reporting requirements of Regulation 1191/2014		
Commission Implementing Regulation (EU) 2015/2065	Format of notification of the training and certification programmes. Relates to personnel qualification standard and mutual recognition of qualifications		
Commission Implementing Regulation (EU) 2015/2066:	F-gas certification for electrical switchgear. Relates to personnel qualification standard and mutual recognition.		



Commission Implementing Regulation (EU) 2015/2067	F-gas certification for refrigeration, air conditioning and heat pumps and trucks and trailers. Relates to personnel qualification standard and mutual recognition. Ozone-Depleting Substances and Fluorinated Greenhouse Gases Common Framework 41		
Commission Implementing Regulation (EU) 2015/2068	F-gas labelling requirements. Enables functioning of the EU (and GB) F-Gas quota system		
Commission Implementing Regulation (EU) 2016/879	Requirements for the F-gas declaration of conformity for pre-charged equipment. Enables functioning of the EU (and GB) F-gas quota system		
Commission Implementing Regulation (EU) 2019/661	General, operational requirements for registration in the registry. Introduction of 'beneficial owner' provisions		
Directive 2002/96/EC (2021/19/EU) , inter alia, regulates equipment containing ODS	The ODS Regulation bans all ODS, with derogations for essential uses and where no technically feasible alternatives are available. Producers and users of ODS must apply to the European Commission each year for quota which, if granted, sets a quantitative limit on the amount they can use for certain permitted uses. All imports and exports of ODS between the EU and third countries must be licensed by the Commission and companies must report to the Commission on their use of ODS annually. Through the ODS Regulation, the EU (previously including the UK) comply with their legally binding obligations under the United Nations Montreal Protocol on Substances that Deplete the Ozone Layer (the Montreal Protocol) (see further detail below).		
Regulation (EC) No 842/2006 of the European Parliament and of the Council of 17 May 2006 on certain fluorinated greenhouse gases and of the Council of 17 May 2006 on certain fluorinated greenhouse gases (the preceding regulation to EU No. 517/2014).	<p>The principal EU F-gas Regulation which aims to cut use of hydrofluorocarbons (HFCs) by 79% by 2030 to meet international commitments under the Kigali Amendment to the Montreal Protocol and help meet domestic climate change targets. -adoption of national legislation and designation of competent authority/ies</p> <ul style="list-style-type: none"> -establishment/adaptation of national training and certification requirements for relevant personnel and companies (Article 5) -establishment of (internal) reporting systems for acquiring emission data from the relevant sectors (Article 6) -establishment of enforcement system (Article 13) <p>The Regulation achieves this through phasing down the amount of HFCs that can be placed on the EU market by allocating steadily-reducing quotas to HFC producers and importers. This quota allocation process is the main mechanism by which the EU will meet their international obligations to phase</p>		



	<p>down HFCs under the Kigali Amendment to the Montreal Protocol, which came into force in 2019. The EU calculates individual companies' quota entitlement, based on the historical amount placed on the market. Quota is required for placing bulk gas and products and equipment containing HFCs on the market.</p> <p>The Regulation also bans F-gases in certain applications and sets requirements for leak checks, leakage repairs and recovery of used gas. In addition, all technicians handling F-gases must be trained in their safe use and be certified. Member States are required to recognise valid F-gas certificates issued elsewhere in the EU.</p>		
<p>Commission Implementing Regulations (EU) 2019/522</p>	<p>Amends/updates the reporting requirements of Regulation 1191/2014 with regards to data on production and imports and exports of polyols containing HFCs.</p>		
<p>Regulations on the Transport of Dangerous Goods Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals Good Laboratory Practice (GLP) (Dirs. 2004/10/EC & 2004/9/EC) Globally Harmonized System for Classification and Labeling of Chemicals (GHS) Pre-packaging (Directive 75/107/EEC 76/211/EEC & 2007/45/EC)</p>	<p>In the context related to chemicals, are aimed at the regulation of transboundary movement and control, as well as the selective admission at the market.</p>		
<p>Aerosol Dispensers (ADD) (Directive 75/324/EEC)</p>	<p>Applies to aerosol dispensers as defined in Article 2 – any non-reusable glass, metal, or plastic container that contains gas under pressure with a release device so that the contents (liquid, powder, paste, or gas) can be ejected. <i>For the purpose of this Directive, an aerosol is considered as 'nonflammable', 'flammable' or 'extremely flammable' according to its chemical heat of combustion and mass content of flammable components, as follows:</i></p> <p><i>(a) The aerosol is classified as 'extremely flammable' if it contains 85 % or more flammable components and the chemical heat of combustion exceeds or is equal to 30 kJ/g;</i></p> <p><i>(b) The aerosol is classified as 'non-flammable' if it contains 1 % or less flammable components and the chemical heat of combustion is less than 20 kJ/g;</i></p>		



	<p><i>(c) All other aerosols will be submitted to the following flammability classification procedures or shall be classified as 'extremely flammable'. The ignition distance test, the enclosed space test and the foam flammability test shall comply with point 6.3.</i></p> <p>Aerosol dispensers which contain flammable mixtures must then be subjected to testing, as indicated in the Directive, to determine if it is flammable or extremely flammable. Flammable and extremely flammable aerosol dispensers are not barred from the market on that basis, they are subject to more extreme labeling requirements than non-flammable products.</p>		
<p>Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants (NEC Directive)</p>	<p>Sets national reduction commitments for main air pollutants that have a significant negative impact on human health and the environment (including nitrogen oxides (NOx), non-methane volatile organic compounds (NMVOC), ammonia (NH3) and fine particulate matter (PM2,5), and sets emission reductions commitments per pollutant for each EU country to be attained by 2020 and 2030. The NEC Directive is interrelated with waste and chemicals legislation taking into account the whole nitrogen cycle, including improving of waste and chemicals management in agriculture, limiting ammonia emissions from the use of mineral fertilizers, etc.</p>		
<p>Directive 94/63/EC on the control of volatile organic compound (VOCs) emissions resulting from the storage of petrol and its distribution from terminals to service stations, amended by the Regulation (EU) 1882/2003 and (EU) 1137/2008 (so-called "Stage I recovery of petrol vapor", and Directive 2009/126/EC on Stage II petrol vapour recovery during refueling of motor vehicles at service stations as well as by Directive 2004/42/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products.</p>	<p>Volatile Organic Compounds (VOCs), a major air pollutant responsible for the formation of ground-level ozone. Emissions of VOCs are also addressed in the Industrial emission Directive 2010/75/EU, as well as in the 1991 Geneva Protocol concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes and the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone.</p>		
<p>EU Directive 2000/53 and EC Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast) (RoHS).</p>	<p>During the the production and use of electrical and electronic products, collection, treatment and disposal of such waste, products may release harmful (hazardous) substances such as lead, mercury and cadmium, which can cause major environmental and health problems. The RoHS Directive</p>		

	<p>aims to prevent the risks posed to human health and the environment related to the management of electrical and electronic waste.</p> <p>It does this by restricting the use of certain hazardous substances in EEE that can be substituted by safer alternatives. These restricted substances include heavy metals, flame retardants or plasticizers. In parallel, <u>the WEEE Directive</u> promotes the collection and recycling of such equipment.</p>		
<p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures</p>	<ul style="list-style-type: none"> -designation of competent authority/ies (Article 43) -implementation of classification, labelling and packaging of substances (Article 4) -implementation of classification, labelling and packaging of mixtures (Article 4) 		
<p>Regulation (EC) No 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals</p>	<ul style="list-style-type: none"> -implementation of the export notification procedure (Article 7) -implementation of procedures for handling of export -notifications received from other countries (Article 8) setting up of procedures for drafting and submission of notifications of final regulatory action (Article 10) setting up of procedures for drafting and submission of import decisions (Article 12) -implementation of the PIC procedure for the export of certain chemicals, in particular those listed in Annex III to the Rotterdam Convention (Article 13) -implementation of the labelling and packaging requirements for exported chemicals (Article 16) -designation of national authorities that control the import and export of chemicals (Article 17) 		
<p>Council Directive 96/82/EC of 9 December 1996 on the control of major accident hazards involving dangerous substances as amended by Directive 2003/105/EC and Regulation (EC) No 1882/2003</p>	<ul style="list-style-type: none"> -adoption of national legislation and designation of competent authority/ies -establishment of effective coordination mechanisms between relevant authorities -establishment of systems for recording information about relevant installations and for reporting on major accidents (Articles 13 and 14) 		
<p>Directive (EU) 2018/849 amending EU Directive 2000/53/EC on End-of-Life Vehicles (ELV), and Directive 2012/19/EU on waste electrical and electronic equipment.</p>	<p>Relate to products that may contain ODS and F-gases</p>		
<p>Directive (EU) 2018/851 amending EU Directive 2008/98/EC on waste, also called Waste Framework Directive (2008/98/EC)</p>	<p>Relate to ODS and F-gases, as well as products that may contain ODS and F-gases after the status change from “product” to “waste”</p>		



<p>Council Directive 1999/31/EC on the Landfill of Waste as amended by Regulation (EC) No 1882/2003</p>	<p>-adoption of national legislation and designation of competent authority/ies -ensuring the relevant waste (relate to ODS and F-gases, as well as products that may contain ODS and F-gases after the status change from “product” to “waste”) is subject to treatment before landfilling (Article 6)</p>		
<p>Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions Council Directive 82/883/EEC on monitoring and surveillance Council Directive 92/112/EEC on programs for the reduction of pollution</p>	<p>Relates to equipment that relies on ODS and F-gases, as well as to the technologies of destruction of ODS and F-gases and the equipment containing them, including: -adoption of national legislation and designation of competent authority/ies -identification of installations that require a permit -implementation of an integrated permit system (Articles 4 to 6, 12, 17(2), 21 and 24 and Annex IV) -establishment of a compliance monitoring mechanism (Articles 8, 14(1)(d) and 23(1)) -implementation of BAT taking into account the BAT conclusions of the BREFs (Article 14(3) to (6) and Article 15(2) to (4)) -establishment of emission limit values for combustion plants (Article 30 and Annex V) -preparation of transitional national plans to reduce total annual emissions from existing plants (optional to setting emission limit values for existing plants) (Article 32)</p>		
<p>EU Regulation No 1257/2013 Regulation on ship recycling amended by Regulation (EC) No 1013/2006 and EU Directive 2009/16/EC</p>	<p>Relates the equipment installed at ships</p>		
<p>The European system of registration, evaluation, authorization and restriction of chemicals REACH (EC 1907/2006)</p>	<p>Articles 69 – 73 of REACH set out the procedure for adopting restrictions. Restrictions are regulatory measures to protect human health and the environment from unacceptable risks posed by chemicals. Restrictions may limit or ban the manufacture, placing on the market or use of a substance. A restriction can apply to any substance on its own, in a mixture or in an article, including those that do not require registration. Restrictions setting out conditions for the placing on the market of substances apply to both domestic production and imports. On 10th October 2018, the EU Commission published Regulation (EU) 2018/1513 amending REACH Annex XVII restricted substances list.</p>		
<p><u>International Conventions regulating Customs systems related to chemicals management and Regulations on the Transport of Dangerous</u></p>	<p>In the context related to chemicals, are aimed at the regulation of transboundary movement and control, as well as the selective admission at the market.</p>		

<p>Goods, Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals, Good Laboratory Practice (GLP) (Dirs. 2004/10/EC & 2004/9/EC) and Globally Harmonized System for Classification and Labeling of Chemicals (GHS), Pre-packaging (Dir. 75/107/EEC 76/211/EEC & 2007/45/EC)</p>			
<p>Pressure Equipment Directive 2014/68/EU ⁴</p>	<p>The Pressure Equipment Directive (PED) is a European directive that sets out the standards for the design, testing and fabrication of pressure equipment generally over one litre in volume and having a maximum pressure more than 0.5 bar gauge (such as refrigeration systems). It also sets the administrative requirements for the "conformity assessment" of pressure equipment, for the free placing on the European market without local legislative barriers. It has been mandatory throughout the EU since 30 May 2002. R717, R32 and the hydrocarbon refrigerants are classified as group 1 fluids. R744 and R1234ze are group 2 fluids.</p>		
<p>Pressure Systems Safety Regulations (PSSR) 2000</p>	<p>The PSSR applies to systems with a total installed power exceeding 25kW. A written scheme of examination is required which in effect means that liquid receivers and pressure relief devices should be checked every five years by a competent person.</p>		
<p>Directive 2014/28/EU ⁵ Commission Directive 2008/43/EC setting up, pursuant to Council Directive 93/15/EEC, a system for the identification and traceability of explosives.</p>	<p>Harmonisation of the laws of the Member States relating to the making available on the market and supervision of explosives for civil uses (recast)</p>		
<p>Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage</p>	<ul style="list-style-type: none"> -adoption of national legislation and designation of competent authorities -establishment of rules and procedures aimed at preventing and remedying of damage to the environment (water, land, protected species and natural habitats) based on the polluter-pays principle (Articles 5, 6, 7, Annex II) -establishment of strict liability for dangerous occupational activities (Article 3(1)(a) and Annex III) -establishment of obligations for operators to take the necessary prevention and remediation measures including liability for costs (Articles 5, 6, 7, 8, 9 and 10) 		

⁴ https://ec.europa.eu/growth/sectors/pressure-gas/pressure-equipment/directive_en (UK guidance at <http://www.realalternatives.eu/guide-to-thpressure-equipment-directive- for-service-engineers>)

⁵ https://single-market-economy.ec.europa.eu/sectors/chemicals/chemicals-legislation_en

	-establishment of mechanisms for affected persons including environmental NGOs to request action by competent authorities in case of environmental damage including independent review (Articles 12 and 13)		
European Pollutant Release and Transfer Register (E-PRTR)	E-PRTR also implements the UNECE's (United Nations Economic Commission for Europe) Kyiv Protocol. E-PRTR provides easily accessible key environmental data from industrial facilities. The legal reporting requirements are defined in the E-PRTR Regulation concerning the establishment of a European Pollutant Release and Transfer Register, updated by Commission Implementing Decision (EU) 2019/1741.		
Council Directive 2008/98/EC on Waste	<p>Relates when the good (substance or equipment containing substance) is qualified as waste.</p> <ul style="list-style-type: none"> -adoption of national legislation and designation of competent authority/ies -preparation of waste management plans in line with the five-step waste hierarchy and of waste prevention programmes (Chapter V, except for Article 29(4)) -establishment of cost recovery mechanism in accordance with the polluter pays principle (Article 14) -establishment of a permitting system for establishments/undertakings carrying out disposal or recovery operations, with specific obligations for the management of hazardous wastes (Chapter IV) -establishment of a register of waste collection and transport establishments and undertakings (Chapter IV) 		

Table 4. Checklist of the EU related cross-sectoral regulations

International legislation/regulation	Relevant context	Status of implementation in a country (examples of national documents)	Upcoming
<u>EU Chemicals Strategy for Sustainability Towards a Toxic-Free Environment</u>	The Chemicals Strategy for Sustainability outlines over 80 actions, and sets an indicative timing for their implementation . The Commission provides a regular update of the state of implementation of the actions in the tracking table .		
<u>The European Green Deal</u> (11/12/2020)	Provides the overall EU strategy to achieve the efficient use of resources by moving from a linear to a circular economy model and aims to restore		

	biodiversity and cut pollution. In particular, it identifies a need to reduce waste generation and foresee changes in the EU waste collection.		
EU Methane Strategy (14/10/2020)	Aims to reduce emissions of methane from anthropogenic sources derived from energy, agriculture and waste sectors. It intends to promote biogas, digestate (as soil improver) and bio-materials production from municipal waste, agriculture waste, manure and waterwaste. In particular, it foresees promotion of composting and anaerobic digestion.		
European Sustainable Investment Plan (14/01/2020)	Investment pillar of the European Green Deal and will apparently mobilise at least €1 trillion of sustainable investments over the next decade. It intends to facilitate and stimulate the public and private investments needed for the transition to a climate-neutral, “green” economy.		
The Circular Economy Action Plan 2.0 (CEAP)	Adopted in March 2020 announces specific strategies to move from a linear to a circular model on a wide range of materials (plastics, textiles, food, batteries, construction, etc.) and foresees waste reduction targets as well as actions to promote reuse, repair and recycling, is one of the main building blocks of the European Green Deal, Europe’s new agenda for sustainable growth. Related strategies include European Green Deal, Chemicals strategy, and Zero pollution action plan , Green and sustainable chemistry model ⁶ prevent chemicals with hazardous properties harm to human health and the environment. The innovation for the green transition of the chemical industry and its value chains must be stepped up and the existing EU chemicals policy must evolve and respond more rapidly and effectively to the challenges posed by hazardous chemicals.		

Table 5. Checklist of the Related Multilateral International Agreements (MIAs)

MIA	Relevant context	Status of implementation in a country (examples of national documents)	Upcoming
The OSPAR Convention	Requires Contracting Parties to apply Best Available Techniques (BAT) and Best Environmental Practice (BEP) including, where appropriate, clean		

⁶ Area of chemistry and chemical engineering focused on the design of products and processes that minimize or eliminate the use and generation of hazardous substances according to the UNEP GREEN AND SUSTAINABLE CHEMISTRY FRAMEWORK MANUAL, <https://www.unep.org/explore-topics/chemicals-waste/what-we-do/policy-and-governance/green-and-sustainable-chemistry>



	<p>technology, in their efforts to prevent and eliminate marine pollution. As defined in <u>Appendix 1 of the OSPAR Convention</u> BAT “means the latest stage of development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of a particular measure for limiting discharges, emissions and waste”. BEP is defined as “the application of the most appropriate combination of environmental control measures and strategies”.</p> <p>It follows that BAT and BEP for a particular source will change with time in the light of technological advances, economic and social factors, as well as changes in scientific knowledge and understanding.</p>		
<p>International Conventions regulating Customs systems:</p> <ul style="list-style-type: none"> -Convention on the Harmonised Commodity Description and Coding System -Customs Convention on the Temporary Importation of Packing -Customs Convention the Temporary Importation of Professional Equipment -Customs Convention Concerning Facilities for the Importation of Goods for Display or Use at Exhibitions, Fair, Meetings or Similar Events -Customs Convention on the ATA Carnet for the Temporary Admission of Goods - ATA Convention 	<p>In the context of chemicals management regulate import-export operations and their admission on the market</p>		
Rotterdam Convention	<p>With regards to the Prior Informed Consent Procedure (PIC) for certain hazardous chemicals in international trade</p>		
Stockholm Convention	<p>PFAS is regulated and EU is considering the ban</p>		
Basel Convention on “the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.	<p>Relates the waste of ODS and F-gases and products that may contain them after they identified as waste.</p>		
<p>Paris Agreement on climate change (next step of Kyoto Protocol)</p> <p>Nationally Determined Contribution of Georgia (NDC)</p> <p>EU Renovation Wave (14/10/2020)</p>	<p>Sets the global target</p> <p>Sets national targets</p> <p>Intends to improve the energy performance of buildings by at least doubling renovation rates in the next ten years and make sure renovations lead to higher energy and resource efficiency.</p>		



<p>Vienna Convention on ozone layer protection Montreal Protocol on substances that deplete ozone layer Kigali Amendment on F-gases</p>	<p>On October 15, 2016, Parties to the Montreal Protocol adopted the Kigali Amendment to phase down production and consumption of hydrofluorocarbons (HFCs) in the following decades. HFCs are widely used alternatives to ODS such as hydrochlorofluorocarbons (HCFCs) and chlorofluorocarbons (CFCs), which are already controlled under the Protocol.</p> <p>The F-gas Regulation requires a 79% cut in the use of hydrofluorocarbons (HFCs) between 2015 and 2030 in order to mitigate climate change. The Regulation achieves this through phasing down the amount of HFCs that can be placed on the EU market by allocating steadily-reducing quotas to HFC producers and importers. This quota allocation process is the main mechanism by which the EU (previously including the UK) will meet their international obligations to phase down HFCs under the Kigali Amendment to the Montreal Protocol, which came into force in 2019. The EU calculates individual companies' quota entitlement, based on the historical amount placed on the market. Quota is required for placing bulk gas and products and equipment containing HFCs on the market.</p>		
<p>Aarhus Convention on access to public information</p>	<p>Regulates public awareness component preparation</p>		

Table 6. Suggested actions on regulation related to preparation of HPMP II ⁷

OVERVIEW OF HCFC RELATED POLICY OPTIONS, <i>to be included in the IS component</i>	Status	Detailed
1. Establishing general guidelines to control import, production, and export of HCFCs		
1.1 Regulatory procedures for HCFC data collection and reporting in place		
1.2 Registration of HCFC importers/exporters		
1.3 A shared database on import quotas and actual imports/exports between ozone office and customs		
1.4 Mandatory reporting by HCFC importers/exporters		
2 Banning/restricting import or placing on the market of bulk quantities of:		
2.1 HCFC-141b (pure substance and in mixtures)		
2.2 HCFC-22 (for certain applications or total ban)		
2.3. Import quotas for HCFC		
2.4. Exemptions from the HCFC import quotas		
3. Banning/restricting import or placing on the market of equipment/products using HCFCs and HCFC blends		
3.1 Residential air conditioners		
3.2 Commercial/Industrial refrigeration units/application (Cold Chain)		
3.3 Commercial A/C (chillers, packaged units, central units)		
3.4 Refrigerated trucks, marine vessels and offshore fishing equipment		
3.5 Used products/equipment containing any HCFC or HCFC blends		
3.6 Use of HCFC or HCFC Blends in production of some or all types of foam		
3.7 Use of HCFC or HCFC Blends as solvent		
3.8 Restrictions on imports/placing on the market of products and equipment containing/relying on HCFC		
3.9 Permits for HCFC transit		
3.10 Permits for each HCFC shipment		
3.11 Requirement for proof of origin for HCFC shipments		
3.12 Fees for HCFC imports / placing on the market		
3.13 -operated licensing system for HCFC		
3.14 Specific phase-down schedules for HCFC		
3.15 Ban on new HCFC installations		
4 Record keeping		
4.1 Mandatory HCFC logbooks		
4.2 Mandatory HCFC equipment logbooks		
5 Training and certification programs		
5.1 Legislative basis for training of customs officers		
5.2 Legislative basis for training of refrigeration service technicians on HCFCs maintenance		
5.3 Legislative basis for certification of refrigeration service technicians		
5.4 Legislative basis for system for monitoring and evaluation of training programs		
6 Preventing HCFC emissions		
6.1 Mandatory recovery and recycling of HCFCs during equipment		
6.2 Monitoring system for reporting on recovered and recycled HCFCs		

⁷⁷ KIP Preparation Kit Data Collection Tool, recommended by UNEP OzoneAction CAP with amendments

6.3 Ban on venting of HCFCs		
6.4 Mandatory leak checks for large capacity equipment		
6.5 Mandatory recovery of refrigerants from the equipment at the end-of-life		
7 Other policies		
7.1 Fiscal incentive/disincentive (Tax subsidies) and economic incentives (investment privileges, industrial/science/recycling parks, free economic zones, Environment Fund, Energy Efficiency Fund, Clearing Fund, Eco insurance, etc)		
7.2 Labelling of HCFC cylinders and containers		
7.3 Ban on non-refillable HCFC containers		
7.4 Penalties for not conforming to Regulations		
7.5. Energy efficiency (EE) labelling, MEPS, benchmarking		
7.6. Introduction of energy-efficient RACHP equipment operating with low- or zero-GWP refrigerants		
7.7. Establishment of recycling, reclamation, and cost-effective destruction		
8. Options related to capacity building and awareness raising component		
8.1. Training of customs officers on HCFC		
8.2. Training of environmental inspectors on HCFC		
8.3. Training and certification of refrigeration technicians		
8.4 Training of refrigeration technicians on the safe use of alternative refrigerants		
8.5 Awareness raising of stakeholders (including architects, engineers, investors)		
8.6 Lessons learned		

Table 7. Suggested actions on regulation related to preparation of HPMP III and KIP

OVERVIEW OF HFC POLICY OPTIONS, <i>to be included in the IS component</i>	Status	Detailed
1. Establishing general guidelines to control import, production, and export of HFCs		
1.1 HFC import/export licensing system in place for import of bulk HFCs		
1.2 Regulatory procedures for HFC data collection and reporting in place		
1.3 Requiring permits for import/export or sale of bulk HFCs		
1.4 Quota system in place for import of HFCs (in tons of CO ₂ equivalent)		
1.5 Registration of HFC importers/exporters		
1.6 A shared database on import quotas and actual imports/exports between ozone office and customs or other relevant agencies		
1.7 Mandatory reporting by HFC importers/exporters		
2 Banning/restricting import or placing on the market of bulk quantities of:		
2.1 High GWP HFCs ⁸		
3. Banning/restricting import or placing on the market of equipment/products using high-GWP HFCs and HFC blends		
3.1 Domestic refrigerators/freezers/coolers		
3.2 Residential air conditioners		
3.3 MAC systems		
3.4 Commercial refrigeration units/application (Cold Chain)		
3.5 Industrial refrigeration units/application (Cold Chain)		
3.6 Commercial A/C (chillers, packaged units, central units)		
3.7 Refrigerated trucks, marine vessels and offshore fishing equipment		

⁸ <https://www.dcceew.gov.au/environment/protection/ozone/rac/global-warming-potential-values-hfc-refrigerants>

3.8 Used products/equipment containing any HFC or HFC blends		
3.9 Use of HFC or HFC Blends in production of some or all types of foam		
3.10 Use of HFC or HFC Blends as solvent		
3.11 Use of HFC or HFC Blends for firefighting		
4. Record keeping		
4.1 Mandatory HFC logbooks		
4.2 Mandatory HFC equipment logbooks		
5 Training and certification programs		
5.1 Legislative basis for training of enforcement officers (customs officers on HCFCs and equipment)		
5.2 Legislative basis for training of refrigeration service technicians on HCFCs		
5.3 Legislative basis for training of refrigeration service technicians in alternative technologies (with safety, toxicity, and high-pressure considerations)		
5.4 Legislative basis for certification of refrigeration service technicians		
5.5 Legislative basis for system for monitoring and evaluation of training programs		
6. Preventing HFC emissions		
6.1 Mandatory recovery and recycling of HFCs during equipment maintenance		
6.2 Monitoring system for reporting on recovered and recycled HFCs		
6.3 Ban on venting of HFCs		
6.4 Mandatory leak checks for large capacity equipment		
6.5 Mandatory recovery of refrigerants from the equipment at the end-of-life		
7 Other instruments		
7.1 Fiscal incentive/disincentive (Tax subsidies) and economic incentives (investment privileges, industrial/science/recycling parks, free economic zones, Environment Fund, Energy Efficiency Fund, Clearing Fund, Eco insurance, etc)		
7.2 Labelling of HFC cylinders and containers		
7.3 Ban on non-refillable HFC containers		
7.4 Penalties for not conforming to Regulations		
7.5. Energy efficiency (EE) labelling, MEPS, benchmarking.		
7.6. Introduction of energy-efficient RACHP equipment operating with low- or zero-GWP refrigerants		
7.7. Establishment of recycling, reclamation, and cost-effective destruction		
7.8. Sustainable or Green Public Procurement as non-price		
8. Options related to capacity building and awareness raising component		
8.1. Training of customs officers on HFC		
8.2. Training of environmental inspectors on HFC		
8.3. Training and certification of refrigeration technicians on HFCs		
8.4 Training of refrigeration technicians on the safe use of alternative refrigerants		
8.5 Awareness raising of stakeholders (including architects, engineers, investors)		
8.6 Lessons learned		
Other regulations both for HPMP and KIP preparation		

Table 8. Suggested actions focused on RAC sector (capacity building component) related to KIP preparation

RAC sector actions	Status	Detailed
RAC association		
RAC association operational		
RAC association congress		
RAC association publications		
RAC association website		
RAC association involved in HPMP activities		
Training on good practices and containment (HCFC, HFC)		
Training needs assessment related to HCFC and HFC technologies		
Training center with trained trainers and HCFC / HFC equipment		
Code of good practice for HCFC / HFC technologies		
Training curriculum on good practices and containment		
Training on good practices and containment (mandatory)		
Training on good practices and containment (voluntary)		
Certification on good practices and containment (mandatory)		
Certification on good practices and containment (voluntary)		
Training on safe use of alternative technologies (HC, CO2, NH3, HFO)		
Training needs assessment related to alternative technologies		
Training center with trained trainers and alternative equipment		
Code of good practice for alternative technologies		
Training curriculum on safe use of alternative refrigerants		
Training on safe use of alternative refrigerants (mandatory)		
Training on safe use of alternative refrigerants (voluntary)		
Certification on safe use of alternative refrigerants (mandatory)		
Certification on safe use of alternative refrigerants (voluntary)		
Safety standards for alternative technologies		
Safety standards for alternative refrigerants (mandatory)		
Safety standards for alternative refrigerants (voluntary)		
Equipment logbooks and inventories		
HCFC equipment logbooks and inventories		
HFC equipment logbooks and inventories		
Energy-efficiency measures		
Energy-efficiency legislation		
Energy-efficiency labelling for equipment		
Minimum energy-efficiency performance standards (MEPS)		
Ozone- and climate-friendly technologies		
Existing examples of ozone- and climate-friendly technologies		
Pilot or demonstration projects related to alternative technologies		
Import bans or restrictions for HCFC products / equipment		
Import bans or restrictions for HFC products / equipment		
Placing on the market bans or restrictions for HCFC products / equipment		
Placing on the market bans or restrictions for HFC products / equipment		
Financial mechanisms (incentives, taxes or tax exemptions)		

Environmental fund (to finance incentives, destruction etc.)		
Refrigerant recovery and recycling		
Refrigerant recovery and recycling center operational		
Other RAC sector actions		
Ban of non-refillable refrigerant cylinders		
Labeling of refrigerant cylinders		
Emission control measures (ban on venting, leakage detection)		
Ban on new installations (HCFC, HFC)		
Collected data on tools used by the RAC technicians in their workshops		

Table 9. Suggested enforcement activities aimed at identifying HFCs illegal transboundary movement⁹ related to KIP preparation

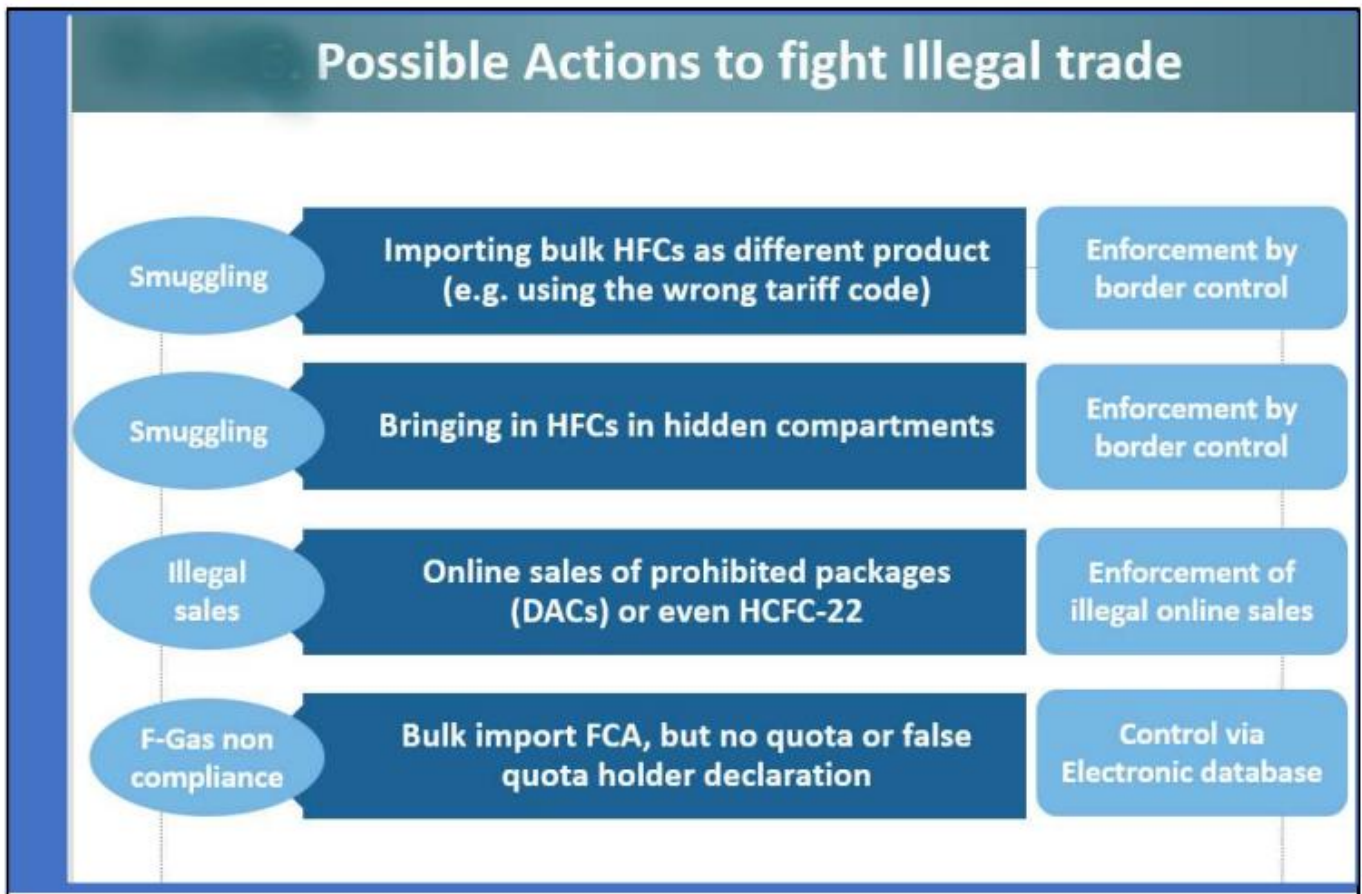
Key applicable measures that characterise the illegal trade	Status	Detailed
Data on transboundary movement of equipment (collected both from the Customs and from the equipment importers/exporters)		
HFCs have been or are intended to be placed on the market by an undertaking that should have (adequate) quota under the EU F-Gas Regulation or national legislation		
HFCs (or other F-Gases) are packaged in refillable containers which are allowed pursuant to article 11 and Annex III of the EU F-gas Regulation or national legislation ¹⁰ .		
HFCs are packaged in EU approved cylinders in breach of the Transportable Pressure Equipment Directive (2010/35/EU)		
REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) Regulation requires companies importing into the EU (or other implementing REAH countries) chemical substances above 1 tonne per year, to register for the level of their imports.		
Targeted Actions by Customs		
In the short term: -Stop the illegal imports from surrounding countries and into main EU harbours -Identify false import declarations into the EU28 and in transit		
In the medium term: -A solid electronic notification system is needed for customs to access the F -Gas Quota Database		
Other enforcement supporting activities:		
Publishing the names and locations of all F-Gas quota holders, which is not currently publicly available.		
Establishment of a fund for the destruction of confiscated HFCs in cases where the non-compliant undertaking cannot bear the cost.		
To check systematically import declarations and verify if importer has (sufficient) quota.		
Targeted inspections in vulnerable sectors, such as automotive AC repair shops, dairy farms.		
Spot checks for ADR compliance (non-refillable cylinders, cylinders without EC/other certificate).		

⁹ European Chemistry Industry Council recommendation. https://www.fluorocarbons.org/wp-content/uploads/2020/08/2019-08-14-EFCTC-Illegal-Trade-of-HFCs-Why.pdf?_gl=1*mg8srk*_ga*MTg3MDI1MTczMC4xNjc2MjE0OTIy*_up*MQ..

¹⁰ Article 2 defines 'a non-refillable container' as a container which cannot be refilled without being adapted for that purpose or is placed on the market without provision having been made for its return for refilling

Share information, data, and results of investigations to further improve the targeting of actions.		
Measures to raise awareness by International/National Associations¹¹		
Press Releases		
Brochures / Illegal Trade leaflet		
Government letter to relevant institutions and authorities, business associations		
Undertaking a PR campaign directed towards end-users		

Figure 1. Summary of Possible Actions to fight illegal trade



¹¹ The whole supply chain is becoming aware of illegal imports. The challenge is to ensure there is a good understanding of its scale, importation and routes for importation and to the market, identification of illegal HFCs, and penalties. Understanding the implications of each of these measures should enable industry to help prevent illegal trade by making sure they know their supply chain and alerting authorities if they suspect illegal trade may be occurring.